



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,680	02/15/2002	Jouni Matula	30-555	7729

7590 05/19/2003

Nixon & Vanderhye
1100 North Glebe Road 8th Floor
Arlington, VA 22201-4714

EXAMINER

HUG, ERIC J

ART UNIT	PAPER NUMBER
----------	--------------

1731

DATE MAILED: 05/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,680

Applicant(s)

MATULA ET AL.

Examiner

Eric Hug

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20,21,25-31,34,36 and 38 is/are rejected.
- 7) ☒ Claim(s) 22-24,32,33,35 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Finland on August 20, 1999 (FI 19991779). It is noted, however, that a copy of the certified copy of the foreign application has not been received in this application from the International Bureau (PCT Rule 17.2(a)).

Claim Objections

Claim 30 is objected to because in the limitation "said wall is sloped downwards and outwards at an angle in a range of 5 degrees to 30 degrees from vertical", the angle is actually 5-30 degrees from the horizontal. See in the specification the paragraph beginning on page 10, line 28, and see also Figure 7, which shows the angles *a* and *g*. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 20, 21, 27, 28, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Witham, Jr. (US 1,629,607). Witham, Jr. discloses a paper machine comprising a wire pit (8)

Art Unit: 1731

having an inclined wall. Water from the wire pit is collected and sent to a mixing pump (10) so that it may intermix with stock going to the paper machine. The wire pit has a large surface area at its opening, which provides a means for entrained gases to escape from the white water, and also has an overflow weir at the shallow end. Deflecting plates (23, 28, 29) and save-all (41) channel water to the wire pit from different locations off of the forming wire.

2. Claims 20, 25-31, 34, 36, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Elderkin (US 2,706,434). Elderkin discloses a water drainage pit for a paper machine designed to reduced entrained air in water recirculated to the paper machine. The pit has an open surface for entrained air to escape and sloped walls (e.g. 38 and 40) that channel water to its bottom. Water is drawn from the bottom of the pit, then mixed with incoming stock, and then sent by fan pump (26) to the headbox of the paper machine. Overflow weirs (e.g. 94) are provided to keep the water at a constant level. Chutes (gates) are indicated by reference number 78 a-f. A skimming weir is provided at the opposite end of the pit (opposite the side of the overflow weir) to skim fibers from the surface of the water where the fiber concentration is highest and to carry them to trough (100). It appears that the sloping wall of the wire pit (which is adjacent to the chute gates and extends away from the chute gates) is about 30 degrees from the horizontal. The sides of the walls are formed with ledges (102, 104) to direct heavy bodies away from the bottom.

3. Claims 20, 21, 28, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Beachler (US 2,748,670). Beachler discloses stock flow systems designed to minimize the

Art Unit: 1731

amount of entrapped air. Water draining from the paper machine flows from save-all (tray) 14 into downspout 15 and into a wire pit 16 having sloped walls. The water flows along a long gentle longitudinal slope. Water flows into basin 29 and into a fan pump 33, where it is mixed with stock and sent to the paper machine. Overflow gates 27 and 28 are provided (See column 7, lines 35-41). The surface of the white water pit is exposed to maximize the release of air (see column 7, lines 45-49).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 20, 21, 25, 31, 36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arakawa (JP 54-082769, abstract translation provided). Arakawa discloses a white water treating device having an inclined shape. After white water is extracted from the forming wire, it collects in draining tank 1 (chute), then flows down inclined passage 2, then enters an inclined separating tank 3 where solids particles are removed from the water by means of inclined boards 7. The white water then flows further downwardly to be recirculated. The draining tank is open at the surface, thus allows for escape of entrained gases. It appears that the angle of the inclined passage 2 initially descends between 20-45 degrees from horizontal.

The features of an overflow portion and a mixing pump at the end of the device are not expressly disclosed in the translated portion of the reference, but at the time of the invention,

Art Unit: 1731

they would have been obvious features to one skilled in the art as being necessary for maintaining the level of the water in the draining tank and for recirculating the water back to the paper machine (see other cited references as evidence of obviousness).

Allowable Subject Matter

Claims 22-24, 32, 33, 35, and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 22-24 are allowable, because the prior art does not disclose or suggest a wire pit as described in claim 20 and further comprising a converging cross-sectional flow path in the flow direction and having a lower portion that is adjustable to a plurality of angular positions. Claim 32 is allowable, because the prior art does not disclose or suggest a wire pit as described in claim 20 and further comprising a middle portion descending at angle of 35-55 degrees from horizontal and located between a lower portion and an upper portion descending at angle of 20-45 degrees. Claim 33 is allowable, because the prior art does not disclose or suggest a wire pit as described in claims 20 and 26, and further comprising at least 50% of the overflow portion located in a zone having the lower fiber content (of the at least two zones described in claim 26). Claim 35 is allowable, because the prior art does not disclose or suggest a wire pit as described in claims 20, 26, and 34, and further comprising a curved or pressure screen as the fiber fraction separator. Claim 37 is allowable, because the prior art does not disclose or suggest a wire pit as described in claims 20 and 36, and further comprising an overflow edge having a height as measured from

Art Unit: 1731

the outlet of the lower portion of the wire pit as being two to five times the diameter of the outlet opening.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hass (US 1,629,701) discloses a white water settling tank having an inclined bottom.

Prechtel (US 3,801,436) discloses a white water system comprising a closed vessel having a degassing chamber. The closed vessel may be vertically positioned and have a sloped bottom directed to the outlet, or it may be horizontally positioned with respect to the flow direction. A pump downstream withdraws water from the vessel and returns it to the stock inlet.

Doran (US 865,168) discloses a return system for white water discharged from the forming section of a paper machine. Water is collected at sluice 13 (chute), then carried through pipe 14 to a tank 9. The tank has inclined bottom walls for channeling water to a discharge pipe 33 at the outlet of tank. A pump recirculates the water back to the paper machine.

Art Unit: 1731

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 703 308-1980. The examiner can normally be reached on Monday through Friday, 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0651.



jeh
May 12, 2003


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700